

PX 156

Message

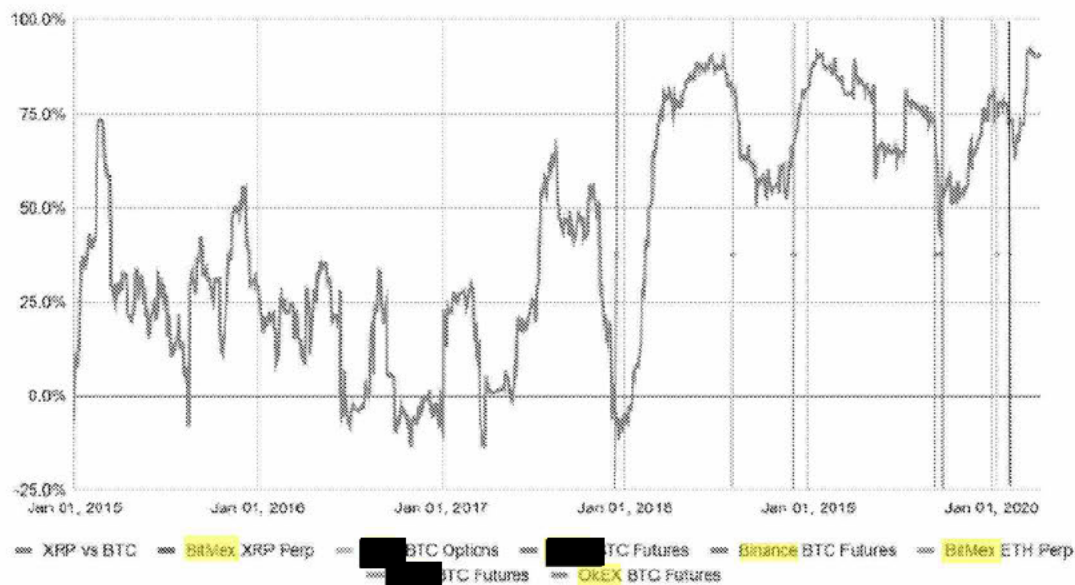
From: Dinuka Samarasinghe [REDACTED]@ripple.com]
on behalf of Dinuka Samarasinghe [REDACTED]@ripple.com]
Sent: 4/15/2020 10:50:15 AM
To: [REDACTED]@ripple.com]
CC: Breanne Madigan [REDACTED]@ripple.com]; [REDACTED]@ripple.com]; [REDACTED]
[REDACTED]@ripple.com]; Monica Long [REDACTED]@ripple.com]; [REDACTED]@ripple.com]; Senior Advisors to the CEO
[REDACTED]@ripple.com]
Subject: Re: XRP correlation plots - Invitation to edit

Hi [REDACTED]

I see the **BitMEX** BTC perpetual launch on May 13th, 2016, and the [REDACTED] BTC futures launch on December 17th, 2017. There were **OkEx** perpetual swaps that were launched on December 3rd, 2018, but this did not appear to have a negative impact on XRP vs. BTC correlation.

However, there were two derivatives listings that were not included in the previous analysis: **Binance's** BTC future (Sept. 12th, 2019) and [REDACTED] BTC future (Sept. 23rd, 2019) that appear to have bookended the September 2019 drop in XRP/BTC correlation, and coincided with a drop in BTC price. Apologies for not including these in the previous write-up. Thank you [REDACTED] for help with the correlation graph going back to 2015.

XRP Rolling 60-Day Correlation vs. Bitcoin



Note that BTC lost 22.0% between September 12th and September 26th, 2019.

I've included these points in the [linked document](#).

Dinuka

On Wed, Apr 15, 2020 at 7:51 AM [REDACTED]@ripple.com> wrote:

Dec 2018 was when BTC perpetual swap was listed, no?

On Tue, Apr 14, 2020 at 11:38 PM Dinuka Samarasingh [REDACTED]@ripple.com> wrote:
Hi [REDACTED]

Please find the [linked document here](#).

TLDR:

- Since January 2018 on, XRP rolling correlation of 60-day returns versus those of bitcoin's went above 50% in Feb. 2018, have largely ranged between 50% and 90%, and recently hit an all time high.
- Correlations dipped below 50% only between Sept. 18th, 2019 - Sept. 23rd, 2019
- The major crypto derivatives listings since 2018 are:
 - Aug. 2, 2018: BitMEX ETH perpetual swap
 - Jan. 6, 2020: Binance XRP perpetual swap
 - Jan. 13, 2020: [REDACTED] BTC Options
 - Feb. 5, 2020: BitMEX XRP Perpetual swap
- The first dip in correlation appears underway during going into the BitEX ETH perpetual swap listing on 8/2/18
 - The launch of the BitMEX ETH perpetual swap appeared to happen in the middle of an overall increase in bitcoin dominance of the overall crypto market capitalization
- The dips in correlation between 1/1/2019 and 1/1/2020 do not appear to be due to derivatives listings. Prominent events leading to dropping correlation between XRP and BTC were:
 - Higher rate of increase of circulating supply for XRP versus that of BTC
 - Crypto market excitement due to the launch of Libra, which XRP did not participate in as much
 - Crypto market fall off due to regulatory scrutiny of Libra, which did not hurt XRP as badly
 - Rotation out of alt-coins into bitcoin, as bitcoin dominance hit a multi-year high in early Sept. 2019
 - A minor alt-coin rally, as alt-coins outperformed bitcoin
- The last three derivatives listings happened relatively close together.
 - XRP correlation with BTC dipped from 80.1% on the date of Binance listing its XRP swap to 63.9%, 11 days after BitMEX listed its XRP swap.
 - However, XRP's 60-day rolling correlation vs. bitcoin hit an all-time high on March 19th, 2020.

On Tue, Apr 14, 2020 at 9:19 AM Dinuka Samarasingh [REDACTED]@ripple.com> wrote:
Hi [REDACTED]

Thank you for the well wishes for my little [REDACTED]

I will get back to you by end of day on an examination of historical drivers for drops in XRP correlation since January 2018.

Cheers,

Dinuka

On Tue, Apr 14, 2020 at 7:50 AM [REDACTED] <[REDACTED]@ripple.com> wrote:

Very helpful, thank you.

From your first chart below, It is fair to say that starting from Jan 2018 on, correlation ranged between 50% to about 90% and it is at an all time high now.

[REDACTED] Is it fair to assume that correlation plunges to 50% around those dates? If not, what are the idiosyncratic announcements which produce this large divergence? What I am after is defanging any argument that says we don't belong in the cohort. Using just the last 30 days without this background knowledge can set us up for a host of problems with credibility.

[REDACTED] once we have the nuanced answer, let's add to what we owe Monica for the crypto basket project. We should include Breanne to that meeting.

Dinuka, thanks again and happy birthday to your boy! Six is such a fun age

On Mon, Apr 13, 2020 at 10:18 PM Dinuka Samarasingh [REDACTED]@ripple.com> wrote:

Hi [REDACTED]

Apologies for the late response. It is my little one's 6th birthday today, and we had a little birthday dinner at home, followed by the usual bath and bedtime routine.

TLDR:

- XRP correlation with BTC began to pick up in 2017
- Before 2017, XRP primarily traded on the XRP Ledger
- 2017 was when external crypto exchanges began to list XRP
- XRP then became much more accessible to digital asset speculators
- XRP traded volumes increased significantly

XRP correlations with bitcoin started to increase in early 2017 (please see the chart below). However, correlations were not as high in 2017 versus 2018 and later, since XRP and BTC had idiosyncratic price action through 2017. In early 2017 we saw the first large XRP/BTC spike, bitcoin rallied in late 2017 ahead of the CME futures launch before plunging, then XRP had an explosive move higher as BTC declined into January 2018.



As for what was so seminal around this time, this was the time when XRP volumes moved from being concentrated on-ledger to XRP getting listed across more prominent external digital asset exchanges. XRP getting listed on these external exchanges led to XRP traded volumes increasing dramatically, with volumes dominated by trading on external exchanges versus on-ledger.

If you recall, at the heart of the XRP Ledger is a decentralized exchange, where XRP is the native asset. In the early days of XRP, XRP traded volumes were almost entirely on the XRP Ledger's decentralized exchange.

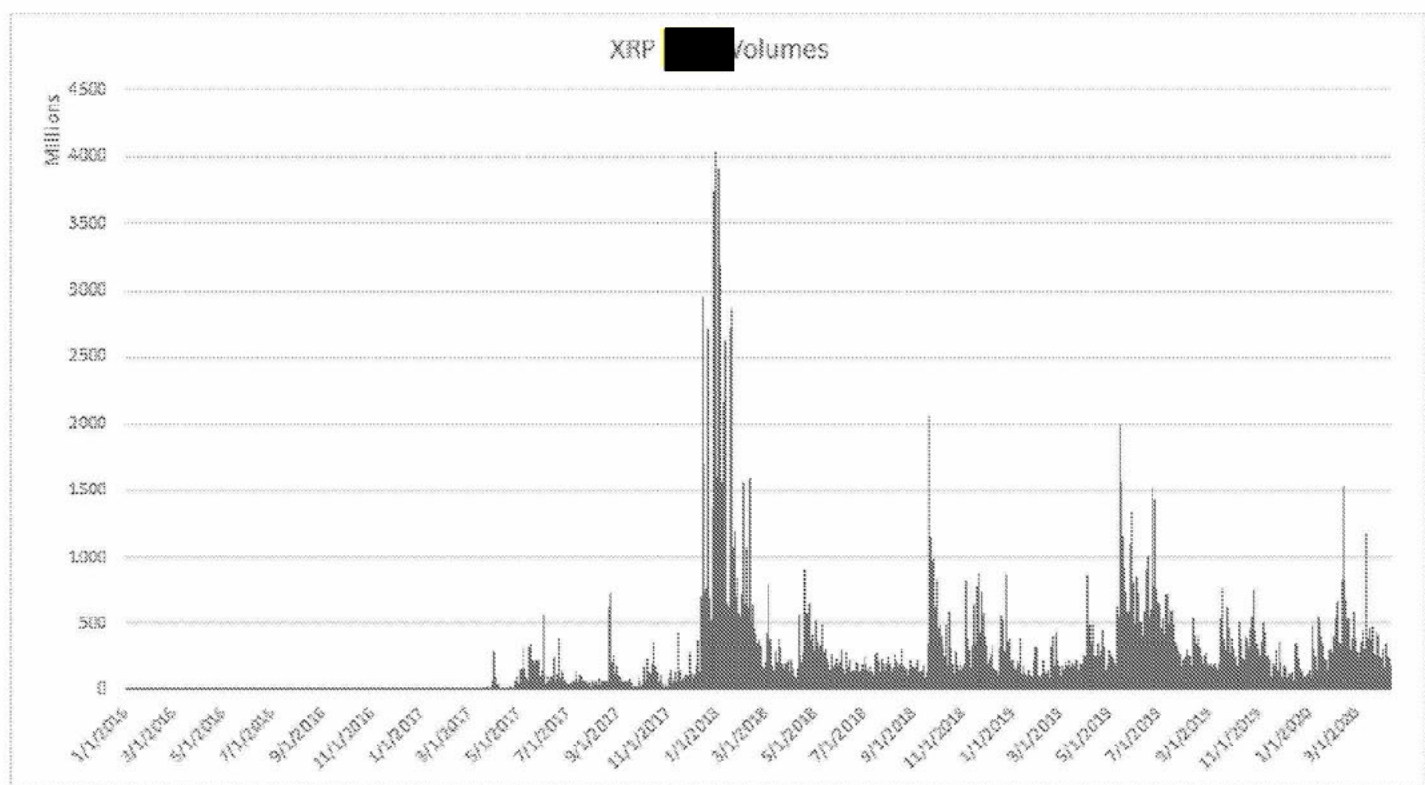
XRP trading on-ledger is mechanically very different than trading on a typical exchange, and usually involves a lot more steps. (Setting up an XRP ledger wallet that has IOU functionality, having an account at a gateway, sending money to the gateway, having IOUs issued on your XRP ledger wallet, vastly different APIs, exchanging XRP for these IOUs, or selling XRP for IOUs which would need to be redeemed at gateways, very small entities issuing these IOUs with significant credit risk, etc.) XRP trading on-ledger isolated XRP liquidity from the broader digital asset speculator community, and tended to attract a much more Ripple focused speculator who had believed in the "Internet of Value" mission, and who were not swayed by anti-Ripple sentiment widespread in the early crypto community.

At the end of 2016, XRP had been listed on 6 global digital exchanges, including the XRP Ledger. But, in 2017, XRP started getting listed on more digital asset exchanges, which already listed BTC. By the end of 2017, XRP was listed on 46 exchanges, including many major exchanges such as **Bitstamp** and the Korean exchanges.

- Jan. 10, 2017: **Bitstamp** introduces XRP trading
- May 11, 2017: Korea crypto exchange **Bithumb** now set to launch Ripple (XRP) trading
- May 12, 2017: **Coinone** launches Ripple trading 3 days ahead of schedule

Exchanges Listing XRP (at end of year)		
2016	2017	2018 current
6	46	104 144+

Please see the XRP [REDACTED] volume chart below. Note that volumes pre-2017 are barely visible. With XRP trading on external exchanges, XRP's trading dynamic became much more similar to how XRP trades today. Having XRP listed on typically digital asset exchanges along with other top digital assets made XRP much more accessible to the typical digital asset speculator. XRP on ledger volumes now make up a very small amount of traded volume (<https://xrpcharts.ripple.com/#/>), today \$819K versus total [REDACTED] volumes of ~\$184M (or 0.44%).



I understand this may be a bit dense and hard to follow. Please let me know if you'd like to speak in case you'd like some clarification.

Dinuka

On Mon, Apr 13, 2020 at 6:51 PM [REDACTED]@ripple.com> wrote:

From 2015 to early 2018, correlation ranges between zero to 50 percent. After that, it is in the current range of 65 to 90 percent. What is so seminal about 2018 to divide so nearly to before and after?

On Mon, Apr 13, 2020 at 6:15 PM Dinuka Samarasinghe [REDACTED]@ripple.com> wrote:

Hi **Zoe**,

Absolutely. Please find the same document, linked [here](#).

I've included the rolling 30, 60, 90, and 180 day charts going back to Jan 1, 2015. Note that given ETH and BCH started trading after this point, their correlation plot starts once we have price data for the full rolling period.

Let me know if you need anything else.

Dinuka

On Mon, Apr 13, 2020 at 5:08 PM [REDACTED]@ripple.com> wrote:
Can we start with 2015? Thank you so much

On Apr 13, 2020, at 4:57 PM, Dinuka Samarasinghe [REDACTED]@ripple.com> wrote:

Hi [REDACTED]

I can go back as far as I have price data for the specific digital assets, shorter by the desired length of period of time. Please see below by the earliest set of price data that I have per top digital asset.

- BTC: April 28th, 2013
- XRP: August 3rd, 2013
- ETH: August 7th, 2015
- BCH: July 23rd, 2017
- LTC: April 28th, 2013

On Mon, Apr 13, 2020 at 4:40 PM [REDACTED]@ripple.com> wrote:
Thank you very much dinuka.
How far back can you go with this series?

On Mon, Apr 13, 2020 at 3:31 PM Dinuka Samarasinghe (via Google Docs) <drive-shares-noreply@google.com> wrote:

[REDACTED]@ripple.com has invited you to **edit** the following document:



XRP correlation plots



Hi all,

Please find the original XRP correlation table versus top digital assets, now including a 3 month period. Also please find graphs of XRP's rolling correlation versus BTC, ETH, BCH, and LTC for 60, 90, and 180 days.

Please let me know if you need anything else.

Dinuka

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